

Practitioner's Docket No. 13189.137

CHAPTER II

IN THE UNITED STATES ELECTED OFFICE (EO/US)

PCT/EP99/09981	15 December 1999 (15.12.99)	16 February 1999 (16.02.99)
International Application Number	International Filing Date	International Earliest Priority Date

U.S. Application Serial No.: 09/913,686

Filing Date: 16 Aug 2001

TITLE OF INVENTION: METHOD AND DEVICE FOR PRODUCING AN ENCRYPTED PAYLOAD DATA STREAM AND METHOD AND DEVICE FOR DECRYPTING AN ENCRYPTED PAYLOAD DATA STREAM

APPLICANT(S): Rump, Niels; Koller, Juergen and Brandenburg, Karlheinz

ATTENTION: EO/US

Box PCT

Assistant Commissioner for Patents

Washington, DC 20231

COMPLETION OF FILING REQUIREMENTS
FOR INTERNATIONAL APPLICATION ENTERING U.S. NATIONAL STAGE
IN U.S. ELECTED OFFICE (EO/US) UNDER 35 U.S.C. section 371

This replies to the Notice of Missing Requirements under 35 U.S.C. Section 371 and 37 C.F.R. Section 1.495 (FORM PCT/DO/EO/905). A copy of FORM PCT/DO/EO/905 accompanies this response.

DECLARATION OR OATH

I. No original declaration or oath was filed. Enclosed are the following documents for this application:

1. Original Combined Declaration And Power Of Attorney;
2. Signature By Joint Inventor(s) On Behalf Of Nonsigning Inventor(s) Who Cannot Be Reached; and
3. Statement Of Facts In Support Of Filing On Behalf Of Nonsigning Inventor, with attachment.

Also enclosed is the English translation of the Notification Of Transmittal Of Copies Of Translation Of The International Preliminary Examination Report.

CERTIFICATE OF MAILING (37 C.F.R. 1.8(a))

I hereby certify that, on the date shown below, this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to ATTENTION: EO/US, Box PCT, Assistant Commissioner for Patents, Washington, DC 20231.

Elaine C. VonSpreckelsen

Date: December 18, 2001

Elaine C. VonSpreckelsen
Signature

FEES

II. Surcharge fees

Surcharge set forth in 37 C.F.R. Section 1.492(e) for accepting the declaration later than 30 months after the priority date in filing an application in the U.S. as a designated office:

\$130.00

Total Fees

\$130.00

EXTENSION OF TIME

- III. The proceedings herein are for a patent application. Accordingly, the provisions of 37 C.F.R. Section 1.136(a) apply. Applicant believes that no extension of term is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.

TOTAL FEE DUE

IV. The total fee due is:

Completion fee(s): \$130.00
TOTAL FEE DUE \$130.00

01/30/2002 SHAWKARD 00000110 501848 05715386
01 FEB154 130.00 CH

PAYMENT OF FEES

- V. Charge Account No. 50-1848 in the amount of \$130.00. A duplicate of this request is attached.

AUTHORIZATION TO CHARGE ADDITIONAL FEES

- VI. The Commissioner is hereby authorized to charge the following additional fees that may be required by this paper and during the entire pendency of this application to Account No. 50-1848:

37 C.F.R. Section 1.492(a)(1), 1.492(a)(4) (filing fees)
37 C.F.R. Section 1.492(b), (c), and (d) (presentation of extra claims)
37 C.F.R. Section 1.17 (application processing fees)
37 C.F.R. Section 1.17(a)(1)-(5) (extension fees pursuant to section 1.136(a))
37 C.F.R. Section 1.492(e) and/or (f) (surcharge fees for filing the declaration and/or an English translation of an international application later than 30 months from the earliest-claimed priority date).

Date:

12/17/07

Reg. No.: 28,494
Tel. No.: 303-379-1114
Fax No.: 303-379-1155

Signature of Practitioner
Carl A. Forest
Customer No.: 24283

<input checked="" type="checkbox"/> Commissioner For Patents, Box PCT, United States Patent and Trademark Office, Washington, D.C. 20231, www.uspto.gov		RECEIVED OCT 30 2001
---	--	--------------------------------

U.S. APPLICATION NUMBER NO. 09/913,686	FIRST NAMED APPLICANT Niels Rump	ATTY. DOCKET NO. 13189.137
---	-------------------------------------	-------------------------------

24283
 PATTON BOGGS
 PO BOX 270930
 LOUISVILLE, CO 80027

INTERNATIONAL APPLICATION NO. PCT/EP99/09981	
IA. FILING DATE 12/15/1999	PRIORITY DATE 02/16/1999

CONFIRMATION NO. 3745
 371 FORMALITIES LETTER.



Date Mailed: 10/18/2001

NOTIFICATION OF MISSING REQUIREMENTS UNDER 35 U.S.C. 371 IN THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US)

The following items have been submitted by the applicant or the IB to the United States Patent and Trademark Office as an Elected Office (37 CFR 1.495):

- U.S. Basic National Fees
- Priority Document
- Copy of IPE Report
- Copy of references cited in ISR
- Copy of the International Application
- Copy of the International Search Report
- Preliminary Amendments
- Request for Immediate Examination

Due Date: 12/18/01
 Statutory Deadline: 4/18/02
 Date Docketed: 10/30/01
 Docketed by: RA
 Sec: ECV
 Atty: CAF

The following items **MUST** be furnished within the period set forth below in order to complete the requirements for acceptance under 35 U.S.C. 371:

- Oath or declaration of the inventors, in compliance with 37 CFR 1.497(a) and (b), identifying the application by the International application number and international filing date.
- \$130 Surcharge for providing the oath or declaration later than the appropriate 30 months from the priority date (37 CFR 1.492(e)) is required.

ALL OF THE ITEMS SET FORTH ABOVE MUST BE SUBMITTED WITHIN TWO (2) MONTH FROM THE DATE OF THIS NOTICE OR BY 22 or 32 MONTHS (where 37 CFR 1.495 applies) FROM THE PRIORITY DATE FOR THE APPLICATION, WHICHEVER IS LATER. FAILURE TO PROPERLY RESPOND WILL RESULT IN ABANDONMENT.

The time period set above may be extended by filing a petition and fee for extension of time under the provisions of 37 CFR 1.136(a).

SUMMARY OF FEES DUE:

Total additional fees required for this application is **\$130** for a Large Entity:

- **\$130** Late oath or declaration Surcharge.

Applicant is reminded that any communications to the United States Patent and Trademark Office must be mailed to the address given in the heading and include the U.S. application no. shown above (37 CFR 1.5)

PATRICIA A BOOKER

Telephone: (703) 305-3738

PART 1 - ATTORNEY/APPLICANT COPY

U.S. APPLICATION NUMBER NO.	INTERNATIONAL APPLICATION NO.	ATTY. DOCKET NO.
09/913,686	PCT/EP99/09981	13189.137

PATENT-COOPERATION TREATY

PCT

NOTIFICATION OF TRANSMITTAL
OF COPIES OF TRANSLATION
OF THE INTERNATIONAL PRELIMINARY
EXAMINATION REPORT

(PCT Rule 72.2)

From the INTERNATIONAL BUREAU

To:

SCHOPPE, Fritz
 Schoppe, Zimmermann & Stöckeler
 Postfach 71 08 67
 D-81458 München
 ALLEMAGNE

17 SEP 2001

Date of mailing (day/month/year) 31 August 2001 (31.08.01)	IMPORTANT NOTIFICATION
Applicant's or agent's file reference FH991202.PCT	
International application No. PCT/EP99/09981	International filing date (day/month/year) 15 December 1999 (15.12.99)
Applicant FRAUNHOFER-GESELLSCHAFT ZUR FÖRDERUNG DER ANGEWANDTEN FORSCHUNG E.V. et al	

1. Transmittal of the translation to the applicant.

The International Bureau transmits herewith a copy of the English translation made by the International Bureau of the international preliminary examination report established by the International Preliminary Examining Authority.

2. Transmittal of the copy of the translation to the elected Offices.

The International Bureau notifies the applicant that copies of that translation have been transmitted to the following elected Offices requiring such translation:

JP, KR, US

The following elected Offices, having waived the requirement for such a transmittal at this time, will receive copies of that translation from the International Bureau only upon their request:

EP

3. Reminder regarding translation into (one of) the official language(s) of the elected Office(s).

The applicant is reminded that, where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report.

It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned (Rule 74.1). See Volume II of the PCT Applicant's Guide for further details.

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. (41-22) 740.14.35	Authorized officer Pascal Pirion Telephone No. (41-22) 338.83.38
--	--

Translation

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference FH991202.PCT	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/EP99/09981	International filing date (day/month/year) 15 December 1999 (15.12.99)	Priority date (day/month/year) 16 February 1999 (16.02.99)
International Patent Classification (IPC) or national classification and IPC H04L 9/00, H04N 7/167		
Applicant FRAUNHOFER-GESELLSCHAFT ZUR FÖRDERUNG DER ANGEWANDTEN FORSCHUNG E.V.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of <u>5</u> sheets, including this cover sheet. <input type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT). These annexes consist of a total of _____ sheets.
3. This report contains indications relating to the following items: I <input checked="" type="checkbox"/> Basis of the report II <input type="checkbox"/> Priority III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability IV <input type="checkbox"/> Lack of unity of invention V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement VI <input type="checkbox"/> Certain documents cited VII <input type="checkbox"/> Certain defects in the international application VIII <input type="checkbox"/> Certain observations on the international application

Date of submission of the demand 13 September 2000 (13.09.00)	Date of completion of this report 30 January 2001 (30.01.2001)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/EP99/09981

I. Basis of the report

1. With regard to the elements of the international application:*

- ☐ the international application as originally filed
- ☒ the description:
 pages _____ 1-20 _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☒ the claims:
 pages _____ 1-30 _____, as originally filed
 pages _____, as amended (together with any statement under Article 19
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☒ the drawings:
 pages _____ 1/4-4/4 _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☐ the sequence listing part of the description:
 pages _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims; Nos. _____
- ☐ the drawings, sheets/fig _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/EP 99/09981

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-30	YES
	Claims		NO
Inventive step (IS)	Claims	1-30	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-30	YES
	Claims		NO

2. Citations and explanations

Claims 1, 17, 28 and 29

- The invention relates to a method (Claim 1) and a device (Claim 28) for generating an encrypted multimedia data stream, and to a method (Claim 17) and a device (Claim 29) for decrypting an encrypted multimedia data stream, said multimedia data stream having a header block and a user data block containing encrypted user data.

It is known from the prior art referred to in the introductory part of the description (in particular DE-C1-196 25 635) to encrypt parts of a header block (destination data block) with different encryption keys, particularly using symmetrical encryption methods. With symmetrical encryption, the user who wishes to decrypt a file needs to have the same encryption key as the provider or supplier who encrypted the multimedia data in order to be able to sell it to the customer.

The present invention addresses the problem of devising an efficient and safe way of encrypting and decrypting multimedia data.

The problem is solved by the method steps defined in Claims 1 and 17 and by the device features defined in Claims 28 and 29. The invention is based on the insight that in order to ensure safe and efficient encryption it is necessary to use a hybrid encryption method, whereby a faster encryption method such as

symmetrical encryption (prior art) or scrambling is used to encrypt and decrypt the actual user data or payload data, whilst a slower asymmetrical encryption method is used to encrypt only the user data encryption key for the (for example) symmetrical encryption method and to transmit it in the encrypted form to a user to enable him to decrypt the encrypted user data stream.

The concept behind the invention is not disclosed in or suggested by the prior art, including EP-A-0 438 154 (cited in the international search report), which is further removed from the subject matter of the present application than the prior art cited by the applicant on pages 1-3 of the description.

The subject matter of Claims 1, 17, 28 and 29 is therefore novel and inventive (PCT Article 33(2) and (3)).

2. Dependent Claims 2-16 and 18-27 define further details relating to the method for generating an encrypted multimedia data stream and to the method for decrypting an encrypted multimedia data stream as per Claims 1 and 17. Dependent Claim 30 defines further details relating to the device for generating an encrypted multimedia data stream and to the method for decrypting an encrypted multimedia data stream as per Claims 28 and 29. The dependent claims are dependent on Claims 1, 17, 28 and 29 and therefore also meet the requirements of novelty and inventive step (PCT Article 33(2) and (3)).